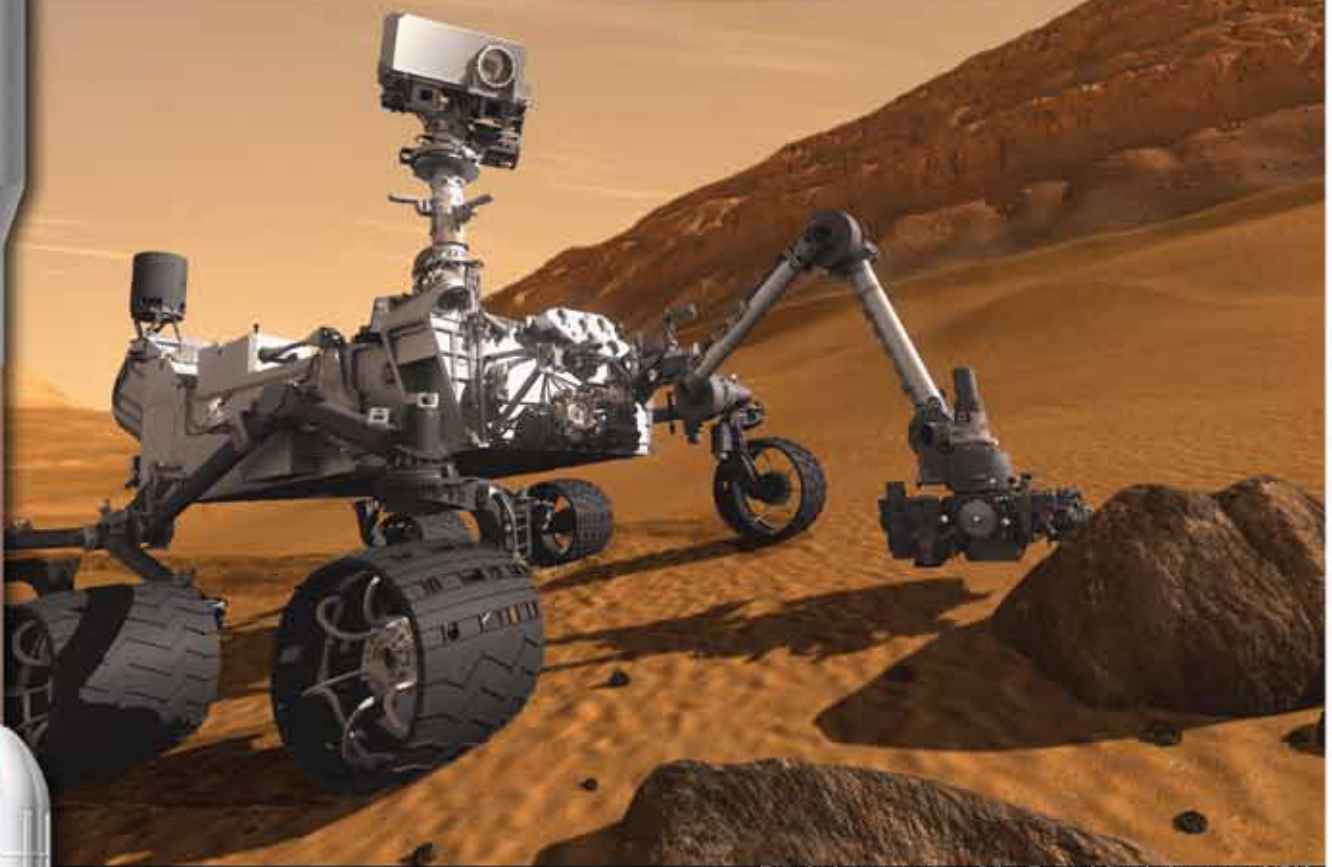




The Launch Services Program Presents

MSL



Rendering courtesy of Jet Propulsion Laboratory (JPL)
NASA's Mars Science Laboratory (MSL) mission features the car-sized Curiosity rover, equipped with the most advanced payload of scientific gear ever deployed to the surface of Mars. The eight-month journey begins with the launch of MSL on an Atlas V 541 vehicle from the coast of Florida in Fall 2011, with planned arrival at Mars in August 2012. The innovative and precise guided entry and powered "sky crane" descent employed to place Curiosity on the Martian surface has made many of Mars' most intriguing regions viable destinations for the first time. During the twenty-three months (one Mars year) after landing, Curiosity will analyze samples drilled from rocks or scooped from the ground as it explores, assesses, and characterizes its landing site region with greater capabilities than any previous Mars rover. Much like a robotic field geologist and mobile geochemical and environmental laboratory, Curiosity will provide us with new data for understanding Mars as a potential habitat for life, past or present.

LAUNCH VEHICLE - ATLAS V 541

LAUNCH LOCATION - CAPE CANAVERAL AIR FORCE STATION, FL

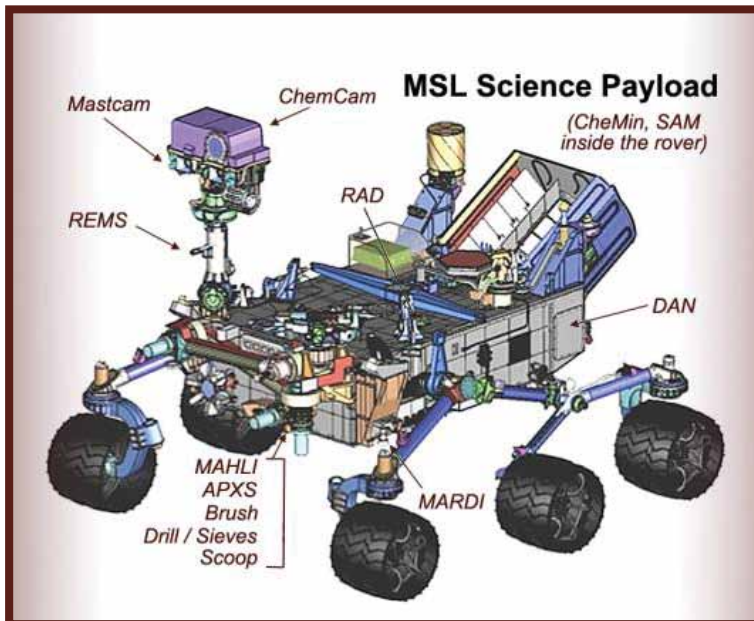
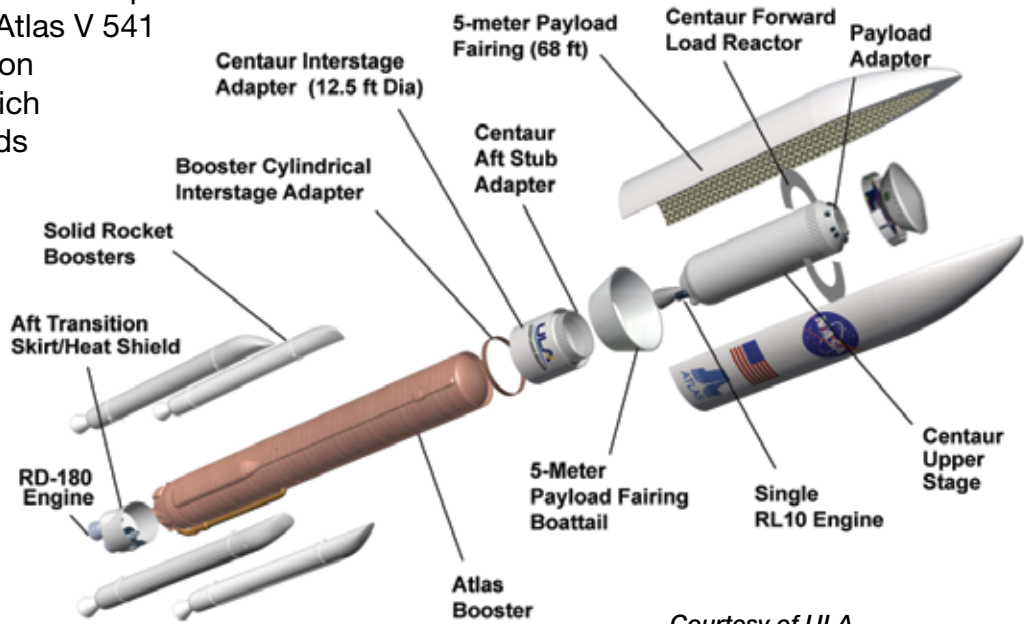
LAUNCH DATE - 2011

Mars Science Laboratory (MSL)

MSL is scheduled to launch aboard a United Launch Alliance (ULA) Atlas V 541 from Cape Canaveral Air Force Station. The Atlas V 541 configuration includes four strap-on solid rocket boosters, each of which adds an additional 330,000 pounds of thrust to the 930,000 pounds provided by the core vehicle's RD-180 engine.

The Atlas V 541 will utilize a 5-meter fairing to protect the payload on the ascent. After the boost phase of flight has been completed, the Centaur upper stage will perform two engine burns to place MSL on a hyperbolic departure trajectory to Mars.

ATLAS V 541 VEHICLE ORIENTATION



Courtesy of NASA/JPL-Caltech

Mastcam is a high-definition imager

ChemCam is the Chemistry and Camera instrument

RAD is the Radiation Assessment Detector instrument

CheMin is the Chemistry and Mineralogy instrument

SAM is the Sample Analysis at Mars instrument

DAN is the Dynamic Albedo of Neutrons instrument

MARDI is the Mars Descent Imager instrument

MAHLI is the Mars Hand Lens Imager instrument

APXS is the Alpha Particle X-ray Spectrometer instrument

The brush, drill, sieves and scoop are tools on the rover's robotic arm

REMS is the Rover Environmental Monitoring Station

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